Pipeline Services Capabilities
Precommissioning, Commissioning, Cleaning and Decommissioning Solutions for the Global Pipeline Industry

With over 40 years' experience in the pipeline industry, Halliburton has amassed an extensive global track record for both onshore and offshore pipeline projects.

By working closely with the client and utilizing our in-house research facilities and experienced personnel, Halliburton delivers innovative, practical and cost-effective solutions for a broad range of pipeline challenges. Projects completed include the following:

- Deepwater precommissioning projects in Brazil
- Scale removal in Egypt
- Minimizing pipeline drying time in Kuwait
- Optimizing wax removal techniques in Norway
- Sand removal offshore Asia
- Hydrocarbon decontamination in the Middle East
- Change of service cleaning operations in North America

Pipeline Precommissioning and Commissioning Services

Halliburton provides the complete suite of integrated services under a single project management team to provide enhanced safety, quality and schedule performance for any project. Typical services include the following:

- Pipeline flooding, gauging and cleaning
- Hydrostatic testing
- Umbilical flushing and testing
- Fiber optic testing
- Leak testing
- Dewatering
- Air, nitrogen and vacuum drying
- Methanol and glycol swabbing
- Nitrogen packing

Pipeline Cleaning and Flow Assurance

Halliburton’s SureStream® flow assurance service provides integrated support for pipelines where throughput has been compromised by deposits such as paraffin waxes, asphaltenes, sand, scale, hydrates or black powder. Typical services include the following:

- Routine and progressive pigging
- Mechanical pigging
- SureTherm™ thermal cleaning
- Hot oiling
- Debris transport with advanced gel systems
- Scale, wax, hydrate and black powder removal
- Preinspection cleaning (for ILI)
- Hydrocarbon decontamination
- Change of service cleaning
- Pipeline decommissioning cleaning

From debris profiling and deposit assessment through engineering support for cleaning program design to execution of remediation services, SureStream service helps maximize production flow by returning pipelines to the original design flow capacity.

Decommissioning
Halliburton's experience and proven systems can help cost-effectively decommission projects in a safe and environmentally responsible manner. Pipelines can be cleaned and recertified for future use or completely decommissioned. Typical services include the following:
- Abandonment
- Onsite management
- Recertification

Umbilical Services
Whatever the service requirement, from umbilical load-out to umbilical hang-off and hook-up in shallow or deep water, Halliburton's engineered solutions and umbilical specialists deliver reliable results. Typical services include the following:
- Load-out monitoring
- Post load-out testing
- Transit monitoring
- Lay monitoring
- Preabandonment testing
- Post-installation testing
- System commissioning

Refer to the Umbilical Precommissioning and Commissioning Services datasheet on www.Halliburton.com for more information.

Deepwater Pipelines and Flowlines
Halliburton has successfully executed projects in water depths of more than 2,000 m (6,560 ft). This experience is the basis for developing and deploying industry leading technologies, such as the subsea pigging and hydrotesting unit, to effectively meet the challenges faced in deepwater.

Subsea Pigging and Hydrostatic Testing Technology
Halliburton's patented subsea pigging and hydrotesting units are proven technologies for remote flooding and testing of pipelines in water depths up to 2,000 m (6,560 ft).

The subsea pigging unit (SPU) operates independently of a host/support vessel to both filter and chemically treat flooding water while continuously regulating and monitoring flooding and pigging operations.

The subsea hydrotesting unit (SHU) enables hydrostatic testing operations to be completed entirely on the seabed.

Refer to the Subsea Pigging and Hydrostatic Testing Services datasheet on www.Halliburton.com for more information.

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Patented Halliburton pigging and testing equipment greatly improves vessel utilization and operating safety and efficiency.

Pipeline Technical Support
Four in-house technology centers provide assistance through research, development, operational support and development of value-driven solutions. Technical support on projects can include the following:
- Mathematical modeling of hydrotesting and dewatering processes
Aside from having one of the largest mobile pumping fleets in the world, Halliburton maintains a wide range of equipment for pipeline projects including filtration units, gel blenders, air drying units, nitrogen equipment, wireless and acoustic monitoring systems and vacuum drying equipment.

Whatever the challenge, from deepwater decommissioning to pipeline scale removal, or from minimizing pipeline drying duration to optimizing wax removal techniques, Halliburton provides research, technology and experienced personnel dedicated to providing solutions to the pipeline industry's challenges.

For more information about how Halliburton Pipeline and Process Services can help make your pipeline projects more cost effective, contact your local Halliburton representative or email pps@Halliburton.com.

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